

Remarks

A. *Status of Claims*

Claims 24-35 were pending. Claim 33 has been amended. Claims 36-41 have been added. Claims 24-41 are now pending. No new matter has been added.

B. *Summary of Examiner Interview*

Applicants thank the Examiner for courtesies extended on January 14, 2005. On January 14th, Applicants' representative Michael Barrett and Examiner Pensee Doe spoke about the present case by telephone. Amendments and arguments of this response were discussed in view of U.S. Patent No. 5,922,537 ("Ewart").

C. *Section 102 Rejections*

Claims 24, 25, and 27-31 stand rejected under 35 U.S.C. § 102 as being allegedly anticipated by Ewart. Applicants respectfully traverse.

Claim 24 requires a specific type of microparticle—one having (a) a conductive core, (b) an insulating layer coating the core and having a thickness sufficient to render the engineered microparticle maneuverable by dielectrophoresis, and (c) a linking element. That particular microparticle must be associated with a target analyte to form a complex. That complex must then be manipulated using dielectrophoresis. Ewart does not meet these requirements.

The Office has already explicitly acknowledged that Ewart does not disclose the limitation "manipulating the complex using dielectrophoresis" appearing in claim 24. In its Office Action dated August 13, 2003, the Office states, "However, *Ewart fails to teach manipulation of a complex using dielectrophoresis.*" (emphasis added). The Office's characterization is correct and confirms that the present Section 102 rejection is unsupported and should be withdrawn. Additionally, Ewart combined with a general dielectrophoresis reference

(such as the Benecke reference lodged by the Office previously) also fails to render claim 24 unpatentable, as explained at length in Applicants' response to the August 13, 2003 Office Action.

Additionally, the subject matter of at least claims 27-30 exhibits independent, patentable distinctions from the cited Ewart reference. Not only does Ewart fail to disclose or suggest the recited manipulation by dielectrophoresis in claim 24, but it also fails to disclose or suggest the particular types of dielectrophoretic manipulation recited in claims 27-30.

Claim 24 and all of its dependent claims are clearly allowable. The cited art admittedly does not anticipate claim 24, and the present rejection is therefore unfounded. Applicants respectfully request withdrawal of the rejection.

D. Section 103 Rejections

Claims 26, 33, and 34 stand rejected under 35 U.S.C. § 103 as being allegedly obvious in view of Ewart. Applicants respectfully traverse.

Claim 26 is allowable for at least the reasons advanced with respect to its independent claim—claim 24, discussed above.

Independent claim 33 has been amended and now recites, "identifying the one or more complexes by distinguishing between the different dielectric properties *using one or more impedance sensors or different dielectrophoretic responses to AC electrical fields of various frequencies.*" (emphasis added). Support for this amendment may be found throughout the specification and particularly at, *e.g.*, page 14, lines 16-19; page 56, lines 27-31; and page 38, lines 23-27.

Ewart fails to disclose or suggest distinguishing between the different recited dielectric properties, for identifying complexes, using (a) one or more impedance sensors or (b) different

dielectrophoretic responses to AC electrical fields of various frequencies. In contrast, Ewart is directed to techniques in which analytes compete with one another to displace a reporter particle off a test surface. *See* Ewart, col. 4, lines 35-42. When a reporter leaves the test surface, the capacitance of the test surface is changed and can be measured to indicate an analyte. *Id.* Amended claim 33 accordingly distinguishes over Ewart, and Applicants respectfully request the current rejection be withdrawn.

E. New Claims

New claims 36-40 correspond generally to original claims 19-23, with claim 36 also including the following feature: “detecting the complex by distinguishing between the first and second dielectric properties *using one or more impedance sensors.*” (emphasis added). As discussed above, Ewart does not disclose or suggest such feature, and new claim 36, and its dependent claims are allowable for at least this reason.

New claim 41 corresponds generally to original claim 19, with claim 41 also including the following feature: “detecting the complex by distinguishing between the first and second dielectric properties *using different dielectrophoretic responses to AC electrical fields of various frequencies.*” (emphasis added). As discussed above, Ewart does not disclose or suggest such feature, and new claim 41 is allowable for at least this reason.

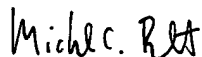
F. Allowable Subject Matter

Applicants appreciate the Examiner’s indication that claims 32 and 35 contain allowable subject matter. However, in view of this submission, Applicants respectfully contend that all pending claims—not only claims 32 and 35—are in condition for allowance.

Conclusion

Applicants believe this response addresses all outstanding issues for this application. Applicants respectfully submit that the pending claims are in condition for allowance. The courtesy of a telephone conference is respectfully requested if any issues are believed to remain. Additionally, if there are any questions, please contact the undersigned attorney.

Respectfully submitted,



Michael C. Barrett
Reg. No. 44,523
Attorney for Applicants

FULBRIGHT & JAWORSKI L.L.P.
600 Congress Avenue, Suite 2400
Austin, Texas 78701
Telephone: 512/536-3018
Facsimile: 512/536-4598

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